

Contracts

- Indefinite Delivery Indefinite Quantity (IDIQ)
 - Task Orders
 - They live, get modified, and can die
 - Cost Plus Award Fee (CPAF)
 - Time and Materials (T&M)

The Pieces

- Statement Of Work (SOW)
- Task Implementation Plan (TIP)
- Pricing File
- Work Breakdown Structure (WBS)
 - 1.1.1 Task Order and Program Management
 - 2.4.0.1 Telemetry, Command, and Control
 - 2.4.0.2 Mission Planning

Task Implementation Plans (TIP)

- **1.0 Introduction**
- **2.0 Subcontractor Technical Approach**
 - 2.1 Task Order Specific Assumptions (Technical and Management)
 - 2.2 Work to be Performed
 - 2.3 Deliverables and Schedules (typically a table with Deliverable, Content, and Schedule)
- **3.0 Task Order Management** (references Primes Program Management Plan)
- **4.0 Basis of Estimate**

Basis Of Estimate – Definition

- BOE – an explanation of the rationale used to generate the estimate for a specific task or item; covers the logic, data, methodology, and calculations used to estimate the resources required to perform the Task Description.
- Federal Acquisition Regulations (the FAR) require certain elements to be in a response to a federal government request for a proposal (RFP)
 - FAR Table 15-2 states “...submit, with your proposal, ... any information reasonably required to explain offeror’s estimating process, including the judgmental factors applied and the mathematical or other methods used in the estimate, including those used in the projecting from known data”.
 - FAR 31 prescribes cost principles and procedures.

Why Prepare a BOE

A BOE is used for proposals for the following reasons:

- To comply with FAR 15 and 31
- To provide consistency/standardization in the estimating thought process
- To help sell your ideas and rationale
- To define the scope of a task
- For fact-finding and negotiations
- Requested by customers to assess reasonableness of cost

Basis of Estimate (BOE) – Section 4.0

4.0 Basis of Estimate for Mod XX				
BASIS OF ESTIMATE				
WBS: X.X.X, WBS Title		Modification Period of Performance: mm/dd/yyyy – mm/dd/yyyy		Prepared By: Subcontractor Preparer Name Date BOE Prepared: mm/dd/yyyy
Note: For details associated with labor, travel, materials and Other Direct Costs (ODC), please refer to the pricing file that accompanies this TIP.				
TASK DESCRIPTION				
This text matches that on cover (page 1).				
LABOR ESTIMATE				
Company	Location	WBS	Labor Category	Total Hours
		X.X.X	SUBTASK 001, Subcontractor Company Name	
Subcontractor	On-Site (Govt)	X.X.X	LABOR CATEGORY 1	X
Subcontractor	On-Site	X.X.X	LABOR CATEGORY 2	X
Subcontractor	Offsite (Other)	X.X.X	LABOR CATEGORY 3	X
			SUBTASK 001 : SUBTASK TITLE Total Hours	X
			Total Hours	X
RATIONALE				
<u>Insert Subcontractor Name</u>				
<u>Subtask 001, WBS X.X.X</u>				
Labor Category (Site Location): EXAMPLE: Software Engineer/Test Engineer, Level II – This labor category will guide and coordinate the acceptance testing and integration efforts and configuration control of software and hardware systems during the move of EO-1 Mission Operations Center. Testing activities will include test procedure development and execution, documentation updates, DR generation, CCB support, and other duties necessary for the successful testing. This is a similar to activities and functions performed under TO XXX since March 2012 on the GSMO-2 contract				
MATERIAL				
No material is required under this Mod.				
TRAVEL				
[Either state "No travel is required under this Mod" or "See the subcontractor's pricing input file"]				
ODC ESTIMATES (Overtime/Shift Premiums, Facility, Utilities, etc.)				
[Enter Other Direct Costs Plan] or No other direct costs are required under this Mod.				
PRICING/ESTIMATING ASSUMPTIONS				
Enter assumptions or state: No pricing assumptions are required under this modification.				

Importance of Properly Prepared BOEs

A properly prepared BOE will help

- Minimize the occurrence of significant cost overruns or underruns on the given task
- Alleviate funding issues with the customer
- Protect award fees associated with cost performance and estimating
- Improve “Past Performance” reference for future business

Methods of Estimating

There are several methods for estimating costs and each estimating technique carries with it a measure of uncertainty and risk.

Estimating Technique

- Historical Data/Vendor Quotes/Catalog Costs
- Comparative Analysis
- Level of Effort
- Parametric Estimates/Cost Modeling
- Engineering Estimates

Risk Level

- Very Low
- Low
- Medium
- High
- Very High

Risk Level: The degree to which actual incurred costs will vary from the estimate.

Estimating Methodology 1: Historical Data

- The **Historical Data technique** uses previously completed programs as the basis for the estimate being proposed. Proposals for current programs not yet complete may also be used as a basis. A previous estimate that has not been translated into actual history is not acceptable as Historical Data.
- Current estimates should relate to Historical Data on a one-to-one basis. If estimates do not relate one-to-one then Comparative Analysis should be used.
- Examples of Historical Data include timekeeping records, catalog costs, vendor discount agreements, and vendor quotes.

Evaluation of Historical Data

- When basing your estimate on historical data, evaluate the content of the data pertaining to:
 - Non-recurring costs - remove from estimate
 - How current is the data? Old data may not reflect expected conditions, several years of historical data may be useful in identifying important trends
 - Assure that other non-representative data is excluded - Historical inefficiencies may not be expected to recur, some historical events are unique and should not be used as a basis for predicting future costs
 - Consistent accounting methodology and cost accumulation
 - ◆ Be sure your historical is “Apples to Apples” with current estimating requirements

Estimating Methodology 2: Comparative Analysis

- The **Comparative Analysis technique** involves the extrapolation of relevant past data to current circumstances. Comparative Analysis has Factual data from the previous program.
- The relationship between the two programs should be fully explained.

Estimating Methodology 3: Level of Effort

- The **Level of Effort technique** is defined as estimating the effort (labor) required to perform a function during a given time period. It is not task oriented.
- Level of Effort Estimates are minimally affected by changes in program quantities, but are generally affected by changes in schedule.

Estimating Methodology 4: Parametric Data

- The **Parametric Data technique** is a statistical approach that determines cost variables by their empirical mathematical relationship to some other variable. It uses Historical databases from several similar products or programs to generate an estimate from a product or service description (technical characteristic) input.
- Often it is calculated as a unit of work that combines several direct resources whose individual contributions to the entire effort are expressed with a number (Factor).
- This estimating technique yields rational data, such as cost per pound, cost per design, hours per drawing, and cost per line of code. The source requirements for this technique are to identify the cost model used and show the statistical approach to arrive at the estimate.

Estimating Methodology 5: Engineering Estimates

- **Engineering Estimates** are the least desirable estimating technique and are used only when other data is unavailable. These estimates are based on judgment using personal experience and offer the most risk to the customer.
- When using an Engineering Estimate as a BOE, the rationale must be clearly stated. The evaluators must be given the rationale behind the Engineering Estimate so that they can understand the thought process leading to the estimate.

Pricing File

- Lists the WBS categories for each task or subtask
- Identifies the labor categories of the people supporting the task
- Identifies the number of hours used for each labor category and the resulting burdened cost
- Contains the Bill of Materials (BOM) delineating the materials required, description, and price quotes
- Contains travel cost estimates